



SANYO
4-BAND 2-AUDIO-CHANNEL
PORTABLE RADIO
RP 8252/8251
SERVICE MANUAL



A PRODUCT OF SANYO ELECTRIC CO., LTD.

SPECIFICATIONS

Frequency Ranges:
(#RP8251SS/AS)

MW 510-1605 kHz
SW1 2.3-7.3 MHz
SW2 7.3-22.0 MHz
FM 87.5-108 MHz

Frequency Ranges:
(#RP 8252E/ZM/G)

LW 150-350 kHz
MW 510-1605 kHz
SW 5.95-18.0 MHz
FM 88-108 MHz

Intermediate Frequency:

AM 455 kHz (RP 8251SS/AS)
AM 460 kHz (RP 8252E/ZM)
AM 470 kHz (RP 8252G)

Transistors:

Q101 2SC930E FM RF Amplifier
Q102 2SC930D FM Converter
Q103 2SC930D AM Converter
Q301 2SC930E FM/AM IF Amplifier
Q302 2SC930D FM/AM IF Amplifier
Q303 2SC930E FM/AM IF Amplifier
Q304 2SC930D FM IF Amplifier
Q305 2SC536F Meter
Q701 2SC536F Audio Amplifier
Q702 2SC536G Tweeter Driver
Q703 2SB324E Tweeter Audio Output
Q704 2SB324E Tweeter Audio Output
Q705 2SC536F Woofer Audio Amplifier
Q706 2SC536G Woofer Driver
Q707 2SB474R Woofer Audio Output
Q708 2SB474R Woofer Audio Output
Q709 2SB187R Voltage Regulator

Sensitivities:

D105 1S188AM
D106 VM11T
D107 DS442
D108 DS442
D301 1S188FM
D302 1S188AM
D303 1S188FM
D304 1S188FM
D305 DS442
D306 MV11T
D701 DS131
D702 DS132
D703 YZ060
LW 140 μ V/m
MW 30 μ V/m
SW 18 μ V
SW1 30 μ V/m
SW2 15 μ V
FM 12 μ V

AM AGC
Limiter
Blank
FM Limiter
FM Limiter
AM Detector
FM Discriminator
FM Discriminator
Meter
Limiter
Rectifier
Rectifier
Regulator
(for 50mW output)
(for 50mW output)
(for 50mW output)
(for 50mW output)
(for 30dB S/N)

Audio Output:

Maximum 4.0W
Undistorted 2.7W

Power Source:

DC 6V (Four "D" size batteries)
AC 120/200/240V for model RP 8251SS/AS
AC 220V for model RP 8252 G/E
AC 120/220/240V for model RP 8252 ZM

Current Drain:

No signal 60mA
Maximum 1200mA

Speakers:

Tweeter 60mm Permanent Dynamic, 4 ohms
Woofer 120mm Permanent Dynamic, 8 ohms
236mm(W) x 252mm(H) x 108mm(D)
(9-1/4" x 10" x 4-1/4")

Dimensions:

Weight:

Approx. 2100g. (4-5/8 lbs.)

Diodes:

D101 1S188FM
D102 1S553
D103 DS442
D104 DS442

FM RF Amplifier

FM Converter

AM Converter

FM/AM IF Amplifier

FM/AM IF Amplifier

FM/AM IF Amplifier

FM IF Amplifier

Meter

Audio Amplifier

Tweeter Driver

Tweeter Audio Output

Tweeter Audio Output

Woofer Audio Amplifier

Woofer Driver

Woofer Audio Output

Woofer Audio Output

Voltage Regulator

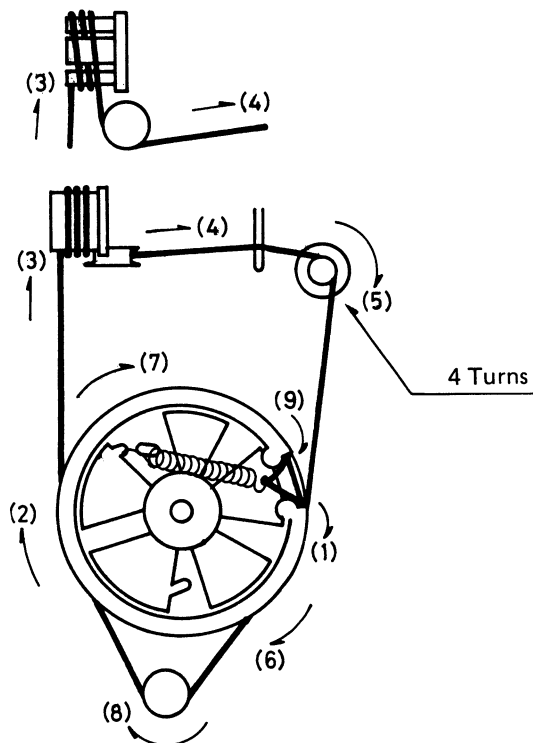
FM Limiter

FM AFC

SW Limiter

SW1/LW Limiter

DIAL CORD STRINGING



PARTS LIST

Part No.	Description	Q'ty	Part No.	Description	Q'ty
PACKING			CHASSIS		
141-6-411T-62100	Instruction Book, RP 8252 E for Continental	1	141-2-331T-02200	Battery Holder	1
141-6-411T-62100	Instruction Book, RP 8252 ZM	1	141-2-538T-02700	Drum, Chassis mtg.	1
141-6-411T-62101	Instruction Book, RP 8252 G, for U.K.	1	141-2-567T-00800	Pulley Shaft, Drum mtg.	1
141-6-411T-62000	Instruction Book, RP 8251 SS/AS	1	141-2-411T-06300	Plate Nut, Pulley Shaft mtg.	1
141-6-141T-05905	Individual Carton, RP 8252 E, for Continental	1	141-2-446T-05500	Plastic Cushion, Indicator Upper	1
141-6-141T-05902	Individual Carton, RP 8252 ZM, for Continental	1	141-2-446T-05200	Plastic Cushion, Tweeter Speaker mtg.	1
141-6-141T-05904	Individual Carton, RP 8252 G, for U.K.	1	141-2-371T-06500	Bracket, Transformer mtg.	1
141-6-141T-05901	Individual Carton, RP 8251 SS, for general market	1	123-2-376R-10600	Spacer, Tuning Capacitor mtg.	1
141-6-141T-07000	Individual Carton, RP 8251 AS, for Australia	1	123-2-538R-00800	Drum, Tuning Capacitor mtg.	1
141-6-311T-02000	Top Pad, for Australia	1	123-2-481R-11800	Spring Coil	1
141-6-144T-21500	Pad	2	141-2-661T-16000	Pulley, Pulley Shaft mtg.	1
141-6-231T-04200	Polyethylene Bag, Unit, RP 8252 G	1	123-2-567R-11800	Pulley Shaft, P.C.B. mtg.	1
	Polyethylene Bag, 350 x 500mm, Unit, RP 8252 E/RP 8251	1	123-0-566R-13900	Tuning Shaft Assembly	1
	Polyethylene Bag, 100 x 200mm	1		Rubber Cushion, 3.5 x 6 x 3.5mm, Bracket	2
141-6-453R-00100	Serial No. Sheet	2		Soft Tape, 10 x 10 x 3mm, Socket	1
141-0-176T-00100	Shoulder Band	1	141-2-446T-05601	Plastic Cushion, Indicator	1
141-6-472T-05603	Label, Caution, RP 8252 ZM/RP 8251 SS	1	MISCELLANEOUS		
141-6-472R-13400	Label, Caution, RP 8251 AS	1	4-151T-16000	Speaker 12cm, Woofer	1
141-6-472R-30620	Label, FTZ, RP 8252 E	1	4-151T-15900	Speaker 6cm, Tweeter	1
123-6-472R-34800	Label, Made in Japan, RP 8252 G	1	4-612T-02605	Pilot Lamp, Light	1
123-6-451R-11700	Guarantee Card, RP 8252 G	1	4-511T-05900	Indicator	1
CABINET			4-256T-80400	FM IF Filter, Red CF 301	1
141-0-111T-214912	Cabinet Assembly, Front, RP 8252 E	1	or 4-256T-80471	FM IF Filter, Blue	
141-0-126T-136916	Back Lid Assembly, RP 8252 E	1	or 4-256T-80472	FM IF Filter, Orange	
141-0-111T-214913	Cabinet Assembly, Front, RP 8252 ZM	1	or 4-256T-80473	FM IF Filter, Black	
141-0-126T-136912	Back Lid Assembly, RP 8252 ZM	1	or 4-256T-80474	FM IF Filter, White	
141-0-111T-214912	Cabinet Assembly, Front, RP 8252 G	1	4-244R-12200	Telescopic Rod Antenna	1
141-0-126T-136914	Back Lid Assembly, RP 8252 G	1	4-235T-26800	Socket, Power RP 8251	1
141-0-111T-214911	Cabinet Assembly, Front, RP 8251 SS/AS	1	4-235T-26900	Socket, Power RP 8252	1
141-0-126T-136911	Back Lid Assembly, RP 8251 SS/AS	1	4-235T-29700	Socket, Earphone/Stereo Out	1
141-0-210T-002912	Bracket Assembly, Dial Scale & Mechanism, RP 8252	1	4-235T-23100	Socket, DIN	1
141-2-146T-03402	Dial Scale, RP 8252	(1)	4-243T-76401	Power Cord Assembly, 6A 250V, RP 8251	1
141-2-210T-00200	Bracket	(1)	4-243R-14501	Power Cord Assembly RP 8252E	1
141-2-329T-03300	Reflector	(1)	4-243T-74900	Power Cord Assembly, RP 8252 ZM	1
141-2-538T-02900	Drum	(1)	4-243T-73971	Power Cord Assembly, RP 8252 G	1
141-2-581T-02300	Gear, Drum mtg.	(1)	4-234T-03100	Fuse 1.25A (SEMKO)	1
141-2-851T-81700	Spring Coil, Gear mtg.	(1)	141-2-381T-01800	Bracket, Fuse	2
141-2-853T-37100	Spring Plate	(1)	123-2-471R-10400	Core, Q102,103 mtg.	2
123-2-210R-20100	Bracket, Gear Shaft	(1)	141-2-135T-32200	Cover, Power Socket mtg.	1
123-2-581R-11100	Gear, Dial Scale	(1)	141-2-368T-08500	Heat-sink, 2SB474 mtg.	2
R-Y112304	Type Screw, Pan Hd. 2.3 x 4mm	(1)		Heat-sink, 2SB324 mtg. (R1B Fin)	2
141-0-210T-002911	Bracket Assembly, Dial Scale & Mechanism, RP 8251	1	141-2-322T-18901	Shield Plate, Parts Side	1
141-2-146T-03401	Dial Scale, RP 8251	(1)	141-2-322T-18100	Shield Plate, Bottom Side	1
	Rubber Cushion, 3.5 x 6 x 3.5mm, Light	1	123-2-382R-00291	Terminal, Test Point	3
	Rubber Cushion, 5 x 10 x 13mm, Speaker	1	123-2-474R-00200	Tip, Test Point	5
141-2-161T-22400	Push Button, Light	1	123-2-382R-00600	Terminal, Tip mtg. (Rod Antenna)	1
141-0-128T-02300	Battery Lid Assembly	1	141-2-336T-06800	Terminal Battery, Spring Coil, (-)	1
141-2-372T-03300	Bracket, Speaker mtg. (Large)	1	141-2-336T-09400	Terminal Battery, Spring Plate, (-)	2
141-2-372T-03100	Bracket, Speaker mtg. (Small)	1	141-2-336T-04903	Terminal Battery, Plate (+)	1
141-2-135T-32900	Cover, LOUDNESS, AFC/MW, POWER Switch	3	123-2-472R-00400	Lug, Rod Antenna mtg.	2
141-6-424T-07900	Battery Sheet, UM-1 x 4	1	141-2-472T-02000	Lug, Tone	1
141-0-163T-07500	Rotary Knob Assembly, Tuning	1	141-2-464T-08700	Fixer, Lead mtg.	2
141-2-163T-22500	Rotary Knob, Sound Control	2	123-2-472R-11100	Lug, Tone Volume	1
141-2-163T-22600	Rotary Knob, Main Volume, Tone	2	4-235R-02200	Socket, Ext. Antenna, RP 8251	1
141-2-163T-26100	Rotary Knob, Fine Tuning	1	123-2-472R-10700	Lug, Ext. Antenna, RP 8251	1
141-0-162T-02900	Lever Knob Assembly, Band Select	1	4-226T-75299	P.C.B. Assembly, RP 8252	1
141-2-352T-10200	Spacer, Tuning Knob	1	4-226T-752991	P.C.B. Assembly, RP 8251	1
CHASSIS			CONTROLS		
141-0-311T-17199	Chassis Assembly	1	VC	4-224R-08400	Tuning Capacitor
141-2-311T-17100	Chassis	(1)	CT2-1,202	4-224R-20700	Fine Tuning Capacitor
141-2-661T-19200	Pulley	(1)	CT1	4-224R-02400	Trimmer, 8pF x 2
	Fiber Washer, 3.2 x 8 x 0.5mm	(1)	CT3	4-224R-01400	Trimmer, 8pF
	Dial Cord, 0.3 x 800mm	1	R708	4-224R-01600	Trimmer, 16pF
141-2-363T-04100	Bracket, Fine Tuning Capacitor	1		4-222T-39100	Main Volume Control, 100K ohms "B"
141-2-365T-28200	Bracket, Voltage Select Switch	1	R717,728	4-222T-39300	Sound Control, Woofer/Tweeter, 100K "C"
141-6-479T-11800	Label, Fuse 1.25 AT	1			

PARTS LIST

Schematic Location	Part No.	Description	Schematic Location	Part No.	Description
CONTROLS			TRANSFORMERS		
R730	4-222T-39200	Tone Control, 100K ohms "W"	T305	4-256T-80300	IF Transformer, AM 460 kHz, RP 8252 E/ZM
R355	4-222T-03100	Mini-pot, Meter Adjust, 2K ohms	T305	4-256T-07200	IF Transformer, AM 470 kHz, RP 8252 G
S1	4-231T-50300	Rotary Slide Switch, Band Select Switch	T306	4-256R-00230	IF Transformer, AM
S2,3	4-231T-17200	Slide Switch, AFC/MW, Loudness	T701	4-254R-02300	Input Transformer, Tweeter
S5	123-2-483R-14300	Spring plate, Light Switch	T702	4-254T-11400	Input Transformer, Woofer
S5	123-2-382R-17800	Terminal, Light Switch	T703	4-254T-13200	Output Transformer, Woofer
S6	4-231R-17250	Slide Switch, Power Switch	T704	4-251T-39500	Power Transformer, AC 220V, RP 8252E
S8	4-231T-42100	Slide Switch, Phono/Radio Switch	T704	4-251T-40300	Power Transformer, AC 120/200/240V, RP 8251
S7	4-231T-37600	Switch, 120/200/240 V. RP8251	T704	4-251T-39600	Power Transformer, AC120/220/240V, RP 8252 ZM
S7	4-231T-37602	Switch, 120/220/240V, RP 8252ZM	T704	4-251T-39700	Power Transformer, AC 240V, RP 8252G
SEMICONDUCTORS			CAPACITORS (Ceramic)		
Q101,301,303	2SC930E	Transistor, 2SC930E	All capacitors are ceramic type, 50V unless otherwise specified.		
Q102,103,302,304	2SC930D	Transistor, 2SC930D	C319	R-CKD010C	1pF ± 0.25 pF
Q305,701,705	2SC536F	Transistor, 2SC536F	C331	R-CKD020C	2pF ± 0.25 pF
Q702,706	2SC536G	Transistor, 2SC536G	C136	R-CKD030D	3pF ± 0.5 pF RP 8252
Q703,704	2SB324E	Transistor, 2SB324E	C107	R-CKD030C	3pF ± 0.25 pF
Q707,708	2SB474R or 2SB474Y	Transistor, 2SB474Red Pair only	C117	R-CKD030D	3pF ± 0.5 pF
Q709	2SB187R	Transistor, 2SB187Red	C101,113	R-CKD050D	5pF ± 0.5 pF
D101,301,303,304	1S188FM	Diode, 1S188FM	C111	R-CKD050C	5pF ± 0.25 pF
D102	1S553	Diode, 1S553	C116,123,130	R-CKD050D	5pF ± 0.5 pF RP 8251
D103,104,107,108,305	DS442	Diode, DS442	C301	R-CKD060D	6pF ± 0.5 pF
D105,302	1S188AM	Diode, 1S188AM	C103	R-CKD080D	8pF ± 0.5 pF
D106,306	MV11T	Diode, MV11T 1.21-1.27V	C118	R-CKD080D	8pF ± 0.5 pF RP 8251
D701	DS131	Diode, DS131	C102	R-CKD100K	10pF $\pm 10\%$
D702	DS132	Diode, DS132	C123,117	R-CKD100K	10pF $\pm 10\%$
D703	YZ060	Diode, YZ060	C127	R-CKD120K	12pF $\pm 10\%$
TH301	SDT-1000	Thermistor, SDT-1000	C115,121	R-CKD150K	15pF $\pm 10\%$
TH701,702,703	SDT-06	Thermistor, SDT-06	C112	R-CKD220J	22pF $\pm 5\%$ N470
COILS			C118	R-CKD220K	22pF $\pm 10\%$ RP 8252
L101,102,105,111,116	4-265R-05000	VHF Coil, 6-1/2 turns, RP 8251	C116	R-CKD130K	13pF $\pm 10\%$ RP 8252
L101,102,105,111	4-265R-05000	VHF Coil, 6-1/2 turns, RP 8252	C137	R-CKD220K	22pF $\pm 10\%$ RP 8251
L117	4-265R-11200	VHF Coil, 16-1/2 turns, RP 8251	C106	R-CKD250J	25pF $\pm 5\%$
L112	4-265R-01300	VHF Coil, 3-1/2 turns	C108	R-CKD250K	25pF $\pm 10\%$
L103	4-265R-00300	VHF Coil, 3-1/2 turns	C104,320	R-CKD300K	30pF $\pm 10\%$
L104	4-265R-12000	VHF Coil, 3-1/2 turns	C130	R-CKD600J	60pF $\pm 5\%$ RP 8252
L106	4-265R-14800	VHF Coil, 3-1/2 turns	C324	R-CKD101M	100pF $\pm 20\%$
L107	4-253R-11160	RF Chork Coil, 1 μ H	C131,321,322,722	R-CKD201M	200pF $\pm 20\%$
L110	4-257T-12101	Antenna Coil Assembly, MW/SW1, RP 8251	C109	R-CKD501M	500pF $\pm 20\%$
L110	4-257T-12201	Antenna Coil Assembly, LW/MW, RP 8252	C303	R-CKD102Z	0.001mfd $\pm 80, -20\%$
L109	4-257R-11730	Antenna Coil, SW2, RP 8251	C114,120,133,305,311,135	R-CKD103Z	0.01mfd $\pm 80, -20\%$
L109	4-257R-27300	Antenna Coil, SW, RP 8252	C105,132,304,306,308,309	R-CKD203Z	0.02mfd $\pm 80, -20\%$
L108	4-253R-10700	Choke Coil, 39 μ H RP 8252	314,318,327,328,330,730,731,733,734,736,737,110,735		
L108	4-255R-10700	Choke Coil, 15 μ H RP 8251	C317,710	R-CKD104M	0.1mfd $\pm 20\%$
L114	4-258R-28100	Oscillator Coil, MW	CAPACITORS (Mylar)		
L115	4-258T-09300	Oscillator Coil, SW1, RP 8251	All capacitors are mylar type, 50V unless otherwise specified.		
L113	4-258T-11100	Oscillator Coil, SW2, RP 8251	C302,725,738	R-CQS102M	0.001mfd $\pm 20\%$
L115	4-258R-28200	Oscillator Coil, LW, RP 8252	C729	R-CQS332M	0.0033mfd $\pm 20\%$
L113	4-258R-28340	Oscillator Coil, SW, RP 8252	C124	R-CQS332M	0.0033mfd $\pm 20\%$ RP 8251
TRANSFORMERS			C125	R-CQS332M	0.0033mfd $\pm 20\%$ RP 8252
T301	4-256R-20830	IF Transformer, FM	C727	R-CQS392M	0.0039mfd $\pm 20\%$
T302	4-256R-19530	IF Transformer, FM	C701	R-CQS472M	0.0047mfd $\pm 20\%$
T303	4-256R-15130	IF Transformer, FM	C119	R-CQS472M	0.0047mfd $\pm 20\%$ RP 8251
T304	4-256R-02330	IF Transformer, FM	C128	R-CQS472M	0.0047mfd $\pm 20\%$ RP 8252
T305	4-256T-06000	IF Transformer, AM 455 kHz, RP 8251	C703	R-CQS682M	0.0068mfd $\pm 20\%$
			C134,315,713	R-CQS103M	0.01mfd $\pm 20\%$
			C110,727,745	R-CQS103M	0.01mfd $\pm 20\%$ RP 8252
			C307,313,309,350	R-CQS203M	0.02mfd $\pm 20\%$ RP 8252
			C124,325	R-CQS203M	0.02mfd $\pm 20\%$
			C719	R-CQS333M	0.033mfd $\pm 20\%$

PARTS LIST

Schematic Location	Part No.	Description	Schematic Location	Part No.	Description
CAPACITORS (Mylar)			RESISTORS		
C712	R-CQS393M	0.039mfd $\pm 20\%$	R112,303,724,750	R-R471K	470 ohm
C316	R-CQS473M	0.047mfd $\pm 20\%$	R118,712,715,726	R-R561K	560 ohm
C704	R-CQS683M	0.068mfd $\pm 20\%$	R746	R-R821K	820 ohm
C720	R-CQS823M	0.082mfd $\pm 20\%$	R101,104,304,307,311,318,322,323,327,713,704,743	R-R102K	1K ohm
C715	R-CQS203M	0.02mfd $\pm 20\%$ RP 8251	R109	R-R122K	1.2K ohm
C701	R-CQS682M	0.0068mfd $\pm 20\%$ RP 8252G	R330	R-R182K	1.8K ohm
C715,716	R-CQS102M	0.001mfd $\pm 20\%$ RP 8252	R120,703,705,711,718,731,737	R-R222K	2.2K ohm
C302	R-CQS152M	0.0015mfd $\pm 20\%$	R315	R-R272K	2.7K ohm
C129	R-CQT141J	Styro! 140pF $\pm 5\%$ 125V, RP 8252	R125,328,714,729,745	R-R332K	3.3K ohm
C126	R-CQT271J	Styro! 270pF $\pm 5\%$ 125V	R739	R-R392K	3.9K ohm
C129	B-CQT302J	Styro! 1200pF $\pm 5\%$ 125V, RP 8251	R736	R-R472K	4.7K ohm
C122	R-CQT302J	Styro! 3000pF $\pm 5\%$ 125V, RP8252	R111,126	R-R562K	5.6K ohm RP 8251
C122	R-CQT342J	Styro! 3400pF $\pm 5\%$ 125V, RP 8251	R105,119,324,325	R-R562K	5.6K ohm
C326,702,708,721	R-C9126	Electrolytic 0.1mfd 10V	R111	R-R682K	6.8K ohm RP 8252
C310	R-C9175	Electrolytic 0.47mfd 10V	R721,720,738	R-R682K	6.8K ohm
C329,705	R-C9251	Electrolytic 1mfd 6.3V	R326	R-R103K	10K ohm RP 8252
C323,707,724	R-C9882	Electrolytic 4.7mfd 6.3V	R312,719	R-R103K	10K ohm
C312,718	R-C9205	Electrolytic 10mfd 6.3V	R127,333,709	R-R123K	12K ohm
C723		Electrolytic 22mfd 6.3V	R350	R-R153K	15K ohm
C711,714,728	R-C9808	Electrolytic 100mfd 6.3V	R108,305,317,309,334	R-R153K	15K ohm
C717	R-C9879	Electrolytic 220mfd 10V	R710	R-R273K	27K ohm
C706,709,726	R-C9875	Electrolytic 220mfd 6.3V	R117	R-R333K	33K ohm
C732	R-C9930	Electrolytic 2200mfd 10V	R706	R-R393K	39K ohm
RESISTORS			R302,332	R-R473K	47K ohm
All Resistors are carbon type, $\pm 10\%$ and 1/4W unless otherwise specified.			R733,732	R-R563K	56K ohm
R723,735	R-R3R3K	3.3 ohm	R707	R-R683K	68K ohm
R116	R-R5R6K	5.6 ohm RP 8252	R702	R-R823K	82K ohm RP 8251
R115	R-R100K	10 ohm RP 8251	R329,331	R-R104K	100K ohm
R115	R-R220K	22 ohm RP 8252	R734	R-R184K	180K ohm
R113,308	R-R220K	22 ohm	R701,751	R-R224K	220K ohm
R316	R-R330K	33 ohm	R102,114	R-R334K	330K ohm
R103,716,744,752	R-R560K	56 ohm	R107	R-R105K	1M ohm
R725,727	R-R680K	68 ohm	R702	R-R394K	390K ohms RP 8252
R106,110,740	R-R101K	100 ohm	R748	R-R0R2J	Winding type 0.22 ohm $\pm 5\%$ 1W
R747	R-R121K	120 ohm	R760	R-R102K	1K ohms
R320,314	R-R151K	150 ohm			
R121,722,741,7321	R-R221K	220 ohm			
R301,306,313,319,742	R-R271K	270 ohm			
	R-R331K	330 ohm			

ALIGNMENT INSTRUCTIONS (Model RP 8251 ss/As)

MW BAND – Band selector switch in MW position

Step	Connection of Signal Gen.	Input Signal Frequency	Dial Setting of Radio	Connection of Output Meter	Adjust	Remarks
1	Loop Antenna	455 kHz	Lowest End	Across Speaker	IFT T305, T306	Adjust for Maximum
2	Same	505 kHz (595 m)	Lowest End	Same	Osc. Coil L114	Same
3	Same	1650 kHz	Highest End	Same	Osc. Trim CT3	Same
4	Same	600 kHz (500 m)	600 kHz (500 m)	Same	Ant. Coil L110a	Same
5	Same	1400 kHz (214 m)	1400 kHz (214 m)	Same	Ant. Trim VCT1-3	Same

SW1 BAND – Band selector switch in SW1 position

7	Loop Antenna	2.2 MHz	Lowest End	Across Speaker	Osc. Coil L115	Adjust for Maximum
8	Same	7.6 MHz	Highest End	Same	Osc. Trim CT2-2	Same
9	Same	2.5 MHz	2.5 MHz	Same	Ant. Coil L110b	Same
10	Same	6.5 MHz	6.5 MHz	Same	Ant. Trim VCT1-4	Same
11	Repeat steps 7 thru 10 to obtain maximum sensitivity.					

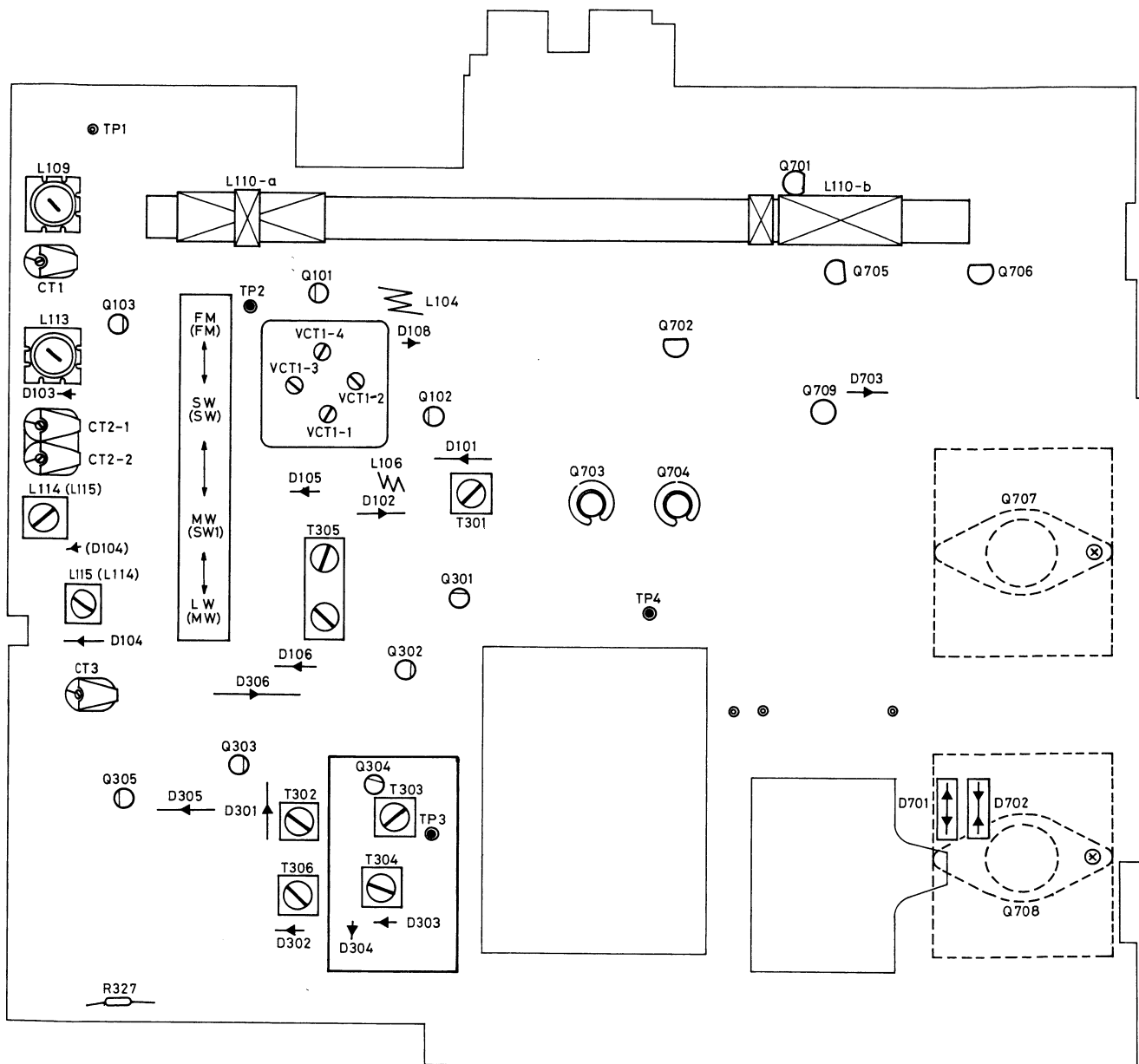
SW2 BAND – Band selector switch in SW2 position

12	Thru Dummy Antenna to TP1 and TP2.	5.75 MHz	Lowest End	Across Speaker	Osc. Coil L113	Adjust for Maximum
13	Same	23.0 MHz	Highest End	Same	Osc. Trim CT2-1	Same
14	Same	8.0 MHz	8.0 MHz	Same	Ant. Coil L109	Same
15	Same	21 MHz	21 MHz	Same	Ant. Trim CT1	Same
16	Repeat steps 12 and 15 to obtain maximum sensitivity.					

FM BAND – Band selector switch in FM position

17	Connect Sweep Marker Generator to TP.1 and TP.2.			Connect scope input cable thru network to TP.3 and TP.4.	IFT T301, T302 & T303	Adjust for maximum sensitivity with symmetrical curve.
18	Same	10.7 MHz	Lowest End	Connect scope input cable thru network to TP.3 and TP.4.	IFT T304	Adjust for symmetrical "S" curve.
19	Connect Signal Generator to TP.1 and TP.2	87 MHz	87 MHz	Connect V.T.V.M. across speaker	Osc. Coil L106	Adjust for maximum.
20	Same	109 MHz	109 MHz	Same	Osc. Trimmer VCT1-2	Same
21	Same	90 MHz	90 MHz	Same	RF Coil L104	Same
22	Same	108 MHz	108 MHz	Same	RF Trimmer VCT1-1	Same
23	Repeat steps 19 thru 22 to obtain maximum sensitivity.					

MAIN PARTS IDENTIFICATION



ALIGNMENT INSTRUCTIONS (Model RP 8252 E/ZM/G)

MW BAND – Band selector switch in MW position

Step	Connection of Signal Gen.	Input Signal Frequency	Dial Setting of Radio	Connection of Output Meter	Adjust	Remarks
1	Loop Antenna (Aerial)	460 kHz (470)	Lowest End	Across Speaker	IFT T305, & T306	Adjust for Maximum
2	Same	505 kHz (595 m)	Lowest End	Same	Osc. Coil L114	Same
3	Same	1650 kHz	Highest End	Same	Osc. Trim CT2-2	Same
4	Same	600 kHz (500 m)	600 kHz (500 m)	Same	Ant. Coil L110b	Same
5	Same	1400 kHz (214 m)	1400 kHz (214 m)	Same	Ant. Trim VCT1-4	Same

LW BAND – Band selector switch in LW position

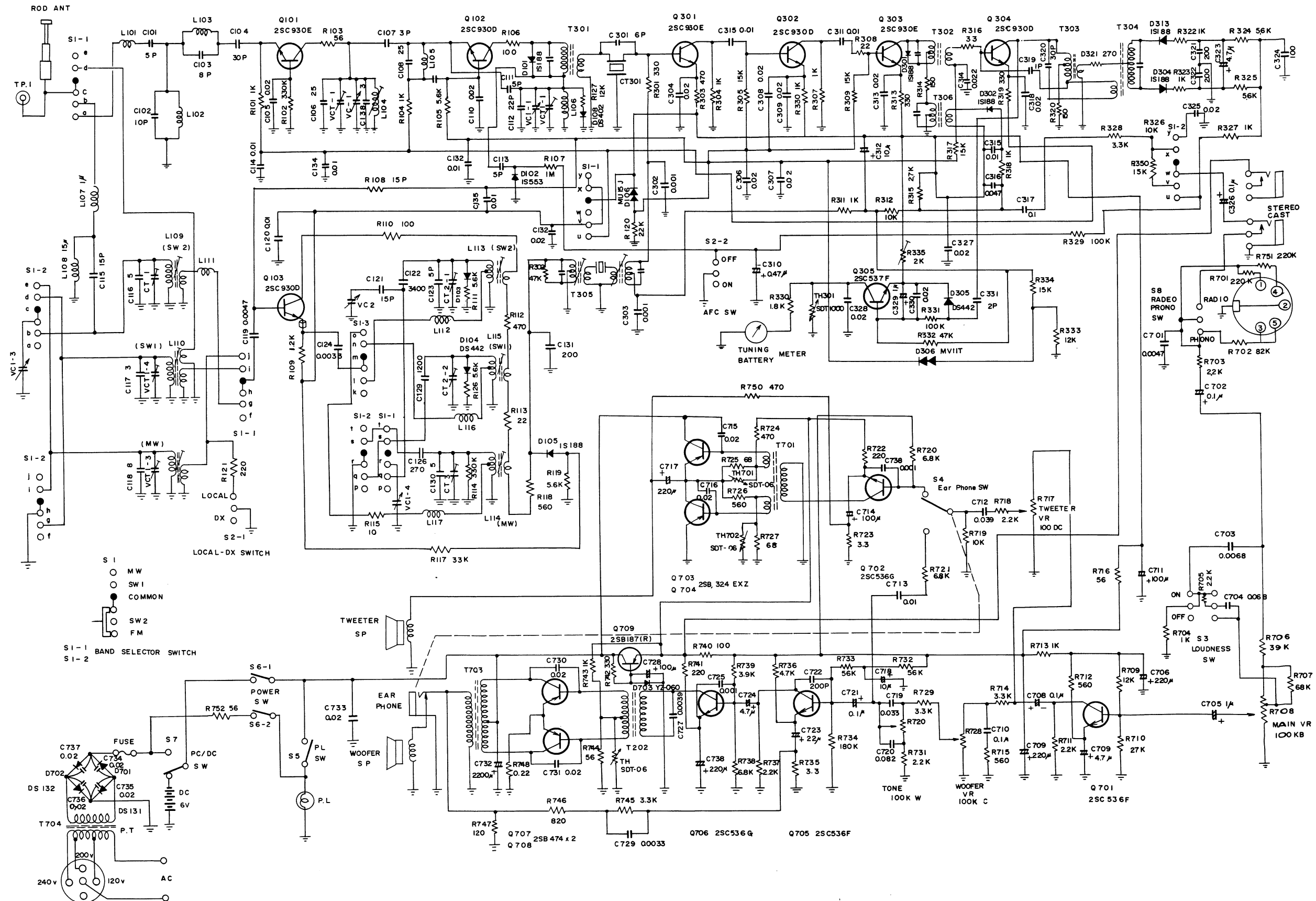
7	Loop Antenna	145 kHz (2060 m)	Lowest End	Across Speaker	Osc. Coil L115	Adjust for Maximum
8	Same	365 kHz (825 m)	Highest End	Same	Osc. Trim CT3	Same
9	Same	160 kHz (1870 m)	160 kHz (1870 m)	Same	Ant. Coil L110a	Same
10	Same	340 kHz (880 m)	340 kHz (880 m)	Same	Ant. Trim VCT1-3	Same
11	Repeat steps 7 thru 10 to obtain maximum sensitivity.					

SW BAND – Band selector switch in SW position

12	Thru Dummy Antenna to TP1 and TP2.	5.85 MHz	Lowest End	Across Speaker	Osc. Coil L113	Adjust for Maximum
13	Same	19.0 MHz	Highest End	Same	Osc. Trim CT2-1	Same
14	Same	6.5 MHz	6.5 MHz	Same	Ant. Coil L109	Same
15	Same	17.5 MHz	17.5 MHz	Same	Ant. Trim CT1	Same
16	Repeat steps 12 and 15 to obtain maximum sensitivity.					

FM BAND – Band selector switch in FM position

17	Connect Sweep Marker Generator to TP.1 and TP.2.			Connect scope input cable thru network to TP.3 and TP.4.	IFT T301, T302 & T303	Adjust for maximum sensitivity with symmetrical curve.
18	Same	10.7 MHz	Lowest End	Connect scope input cable thru network to R327 and TP.4	IFT T304	Adjust for symmetrical "S" curve.
19	Connect Signal Generator to TP.1 and TP.2	87 MHz	Lowest End	Connect V.T.V.M. across speaker	Osc. Coil L106	Adjust for maximum.
20	Same	109 MHz	Highest End	Same	Osc. Trimmer VCT1-2	Same
21	Same	90 MHz	90 MHz	Same	RF Coil L105	Same
22	Same	106 MHz	106 MHz	Same	RF Trimmer VCT1-2	Same
23	Repeat steps 19 thru 22 to obtain maximum sensitivity.					



Q701 2SC536F
C: (2.0V)
B: (2.6V)
E: (3.3V)

Q702 2SC536G
C: (1.0V)
B: (2.9V)
E: (3.6V)

Q703 2SB324E
C: (6.0V)
B: (2.8V)
E: (2.7V)

Q704 2SB324E
C: (2.7V)
B: (0.18V)
E: (0V)

Q705 2SC536F
C: (0.6V)
B: (2.8V)
E: (3.6V)

Q706 2SC536G
C: (0.8V)
B: (3.0V)
E: (3.7V)

Q707 2SB474
Q708 2SB474
C: (6.0V)
B: (0.1V)
E: (0.05V)

Q709 2SB187
C: (6.0V)
B: (5.7V)
E: (5.5V)

Q101 2SC930E
C: (0.15V)
B: (2.1V)
E: (3.2V)

Q102 2SC930D
C: 0V (0.06V)
B: 3.4V (3.1V)
E: 0V (3.4V)

Q103 2SC930D
C: 0.6V (0.02V)
B: 3.0V (3.4V)
E: 4.0V (0V)

Q301 2SC930E
C: 0.5V (0.5V)
B: 3.7V (3.4V)
E: 4.3V (4.1V)

Q302 2SC930D
C: 1.1V (1.1V)
B: 3.5V (3.2V)
E: 4.2V (4.0V)

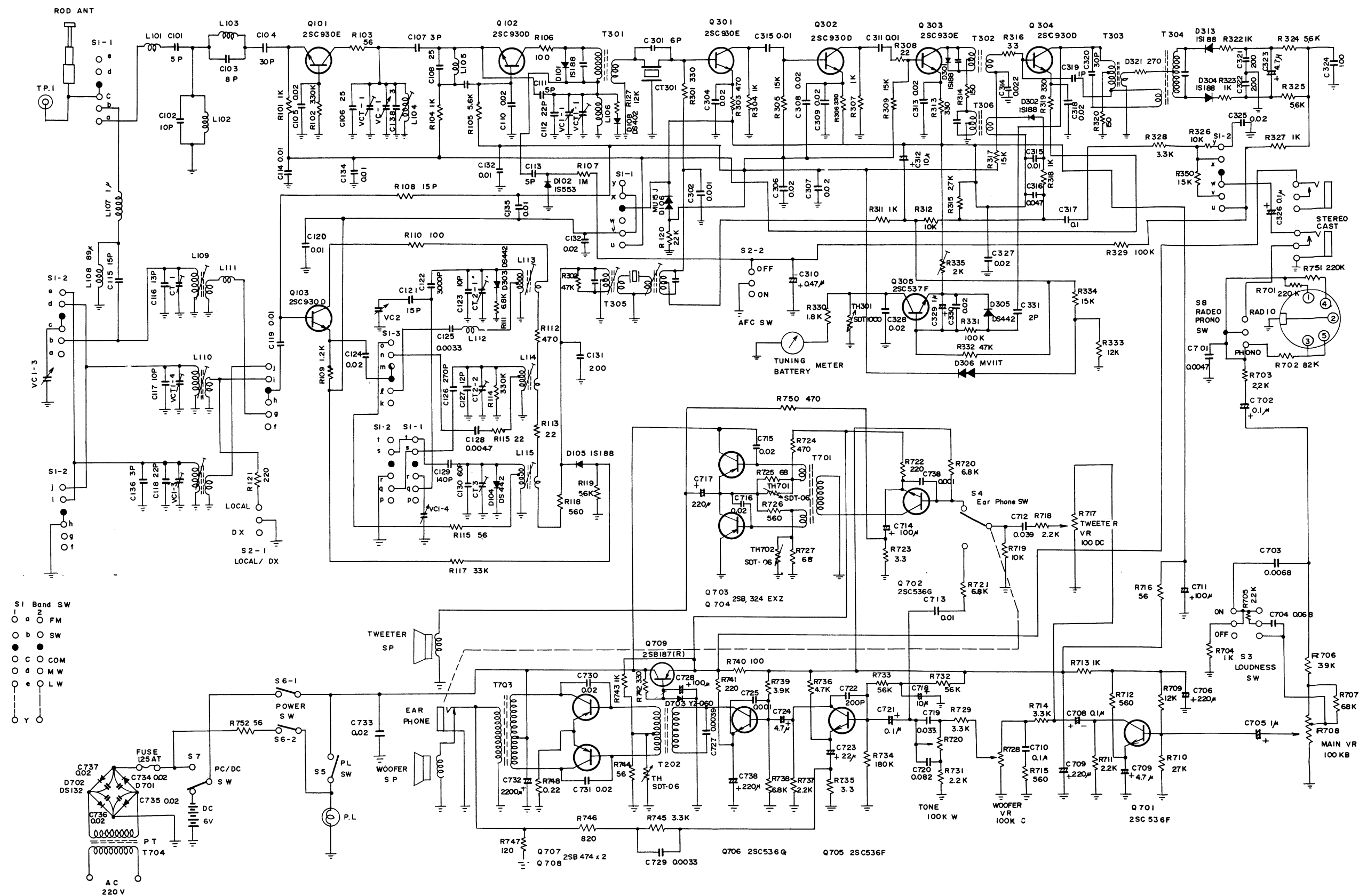
Q303
C: 0.4V (0.3V)
B: 3.4V (3.1V)
E: 3.9V (4.2V)

Q304
C: 0V (0.2V)
B: 3.3V (3.2V)
E: 0V (4.0V)

Q305
C: 0.4V (0.2V)
B: 3.4V (3.5V)
E: 4.2V (3.9V)

NOTE VOLTAGES IN PARENTESIS FOR FM OPERATION.

SCHEMATIC DIAGRAM (Model RP8252E/G)



CIRCUIT BOARD DIAGRAM (Bottom View) (Model RP8251 SS/AS)

Q701 2SC536F
C: (2.0V)
B: (2.6V)
E: (3.3V)

Q702 2SC536G
C: (1.0V)
B: (2.9V)
E: (3.6V)

Q703 2SB324E
C: (6.0V)
B: (2.8V)
E: (2.7V)

Q704 2SB324E
C: (2.7V)
B: (0.18V)
E: (0V)

Q705 2SC536F
C: (0.6V)
B: (2.8V)
E: (3.6V)

Q706 2SC536G
C: (0.8V)
B: (3.0V)
E: (3.7V)

Q707 2SB474
Q708 2SB474
C: (6.0V)
B: (0.1V)
E: (0.05V)

Q709 2SB187
C: (6.0V)
B: (5.7V)
E: (5.5V)

Q101 2SC930E
C: (0.15V)
B: (2.1V)
E: (3.2V)

Q102 2SC930D
C: 0V (0.06V)
B: 3.4V (3.1V)
E: 0V (3.4V)

Q103 2SC930D
C: 0.6V (0.02V)
B: 3.0V (3.4V)
E: 4.0V (0V)

Q301 2SC930E
C: 0.5V (0.5V)
B: 3.7V (3.4V)
E: 4.3V (4.1V)

Q302 2SC930D
C: 1.1V (1.1V)
B: 3.5V (3.2V)
E: 4.2V (4.0V)

Q303
C: 0.4V (0.3V)
B: 3.4V (3.1V)
E: 3.9V (4.2V)

Q304
C: 0V (0.2V)
B: 3.3V (3.2V)
E: 0V (4.0V)

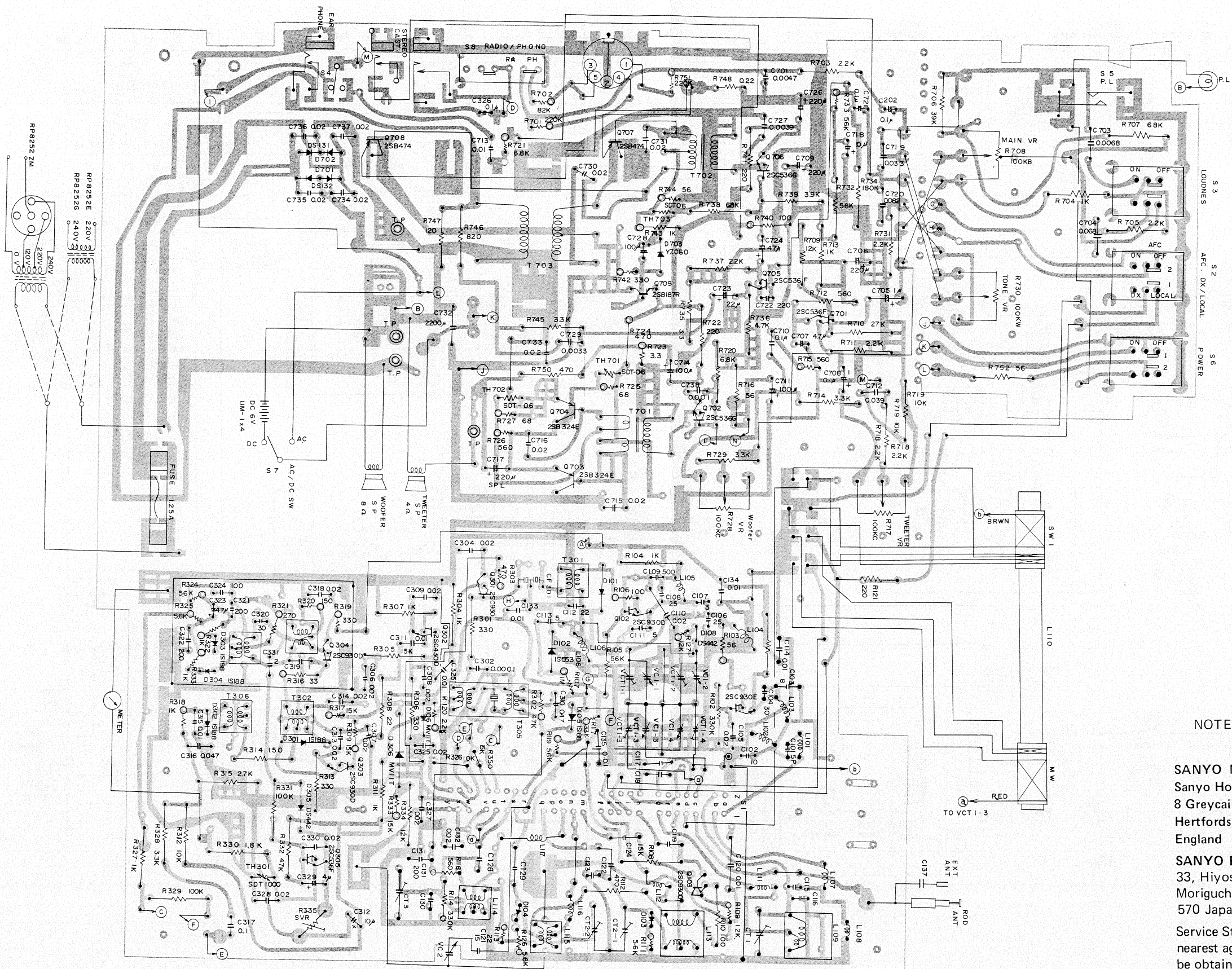
Q305
C: 0.4V (0.2V)
B: 3.4V (3.5V)
E: 4.2V (3.9V)

NOTE: VOLTAGES IN PARENTHESES
FOR FM OPERATION.

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Hertfordshire WD2 4 UQ
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SANYO ELECTRIC TRADING CO., LTD.
33, Hiyoshi-cho 2-chome,
Moriguchi-shi, Osaka-fu,
570 Japan

Service Stations EUROPE: Name + address of
nearest agent or Service Station in Europe may
be obtained from:
SANYO "Servicecenter"
P.O. Box CH4001, Basel,
Switzerland



MODIFICATION NOTICE

PORTABLE RADIO

Chassis Nos. _____
Serial Nos. _____
Run Nos. _____
Date _____

Date Jun. 10, 1977 Issued by _____



RP 8251	RP 8252ZM
RP 8251 (AUS)	RP 8252E
RP 8252	RP 6850 (USA)
RP 8252G	RP 6850 (CANADA)

The following corrections should be made in the SERVICE MANUALS and PARTS (PRICE) LIST.

Section	Ref. No.	Original Part No.	New Part No.	Description	Reason
Controls	S2,3	4-231T-17200	4-231R-17200	Slide switch AFC/MW, Loudness	E

REASON FOR MODIFICATION

A Standardization	C Improvement of reliability	E Miss print
B Change of materials	D Improvement of performance	

SANYO ELECTRIC TRADING CO., LTD.
OSAKA, JAPAN